

MISSOURI. Conservationist

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The Grand Experiment

In July of 1938, *The Missouri Conservationist* Volume 1, Issue 1, was published. The magazine began “in the nature of an experiment” as E. Sydney Stephens stated in that first issue and its continuance was

based on the interest of the people of Missouri. What an interest! For more than 70 years the *Conservationist* has provided information to multiple generations.

As I grew up in central Missouri I couldn't wait for the next issue of the *Conservationist*. It brought interesting articles with information on how to do a range of outdoor activities and guides to places to go and things to see. Each edition held tales of conservation adventures that helped instill a solid conservation ethic in a rural farm kid.

The Department, the *Conservationist* and our employees are dedicated to serving hunters, fishermen, naturalists, students and any citizen who simply has an interest in Missouri's natural resources. Our goal is to serve all Missourians by exposing them to the outdoors, educating them about conservation, offering ideas for new and exciting activities and encouraging them to be good stewards of our state's resources.

When I visit with Missouri's hunters and anglers they often tell me they would like to see more articles on hunting and fishing. Then a naturalist, or someone who simply enjoys nature, will request more articles on native plants and animals. It is a balance to serve all Missourians and provide natural resource information across a wide spectrum of individual interests and conservation ideals.

It's a magazine whose pages are filled by professional and citizen writers alike. Anyone can submit an article or information to the *Conservationist* staff. Some great professional writers have written for the magazine and Department employees routinely submit articles about their varied areas of expertise. World class

photographers provide stunning images that bring Missouri's outdoors into our living rooms. Quality editors and countless professionals have helped produce the award-winning magazine over the years.

Important ideas and issues have graced its pages and well-known conservation leaders, such as Aldo Leopold, have provided material and thoughts to the magazine. Our most important contributors continue to be the “citizen conservationists” who work tirelessly to improve the magazine, the Department and our state's natural resources.

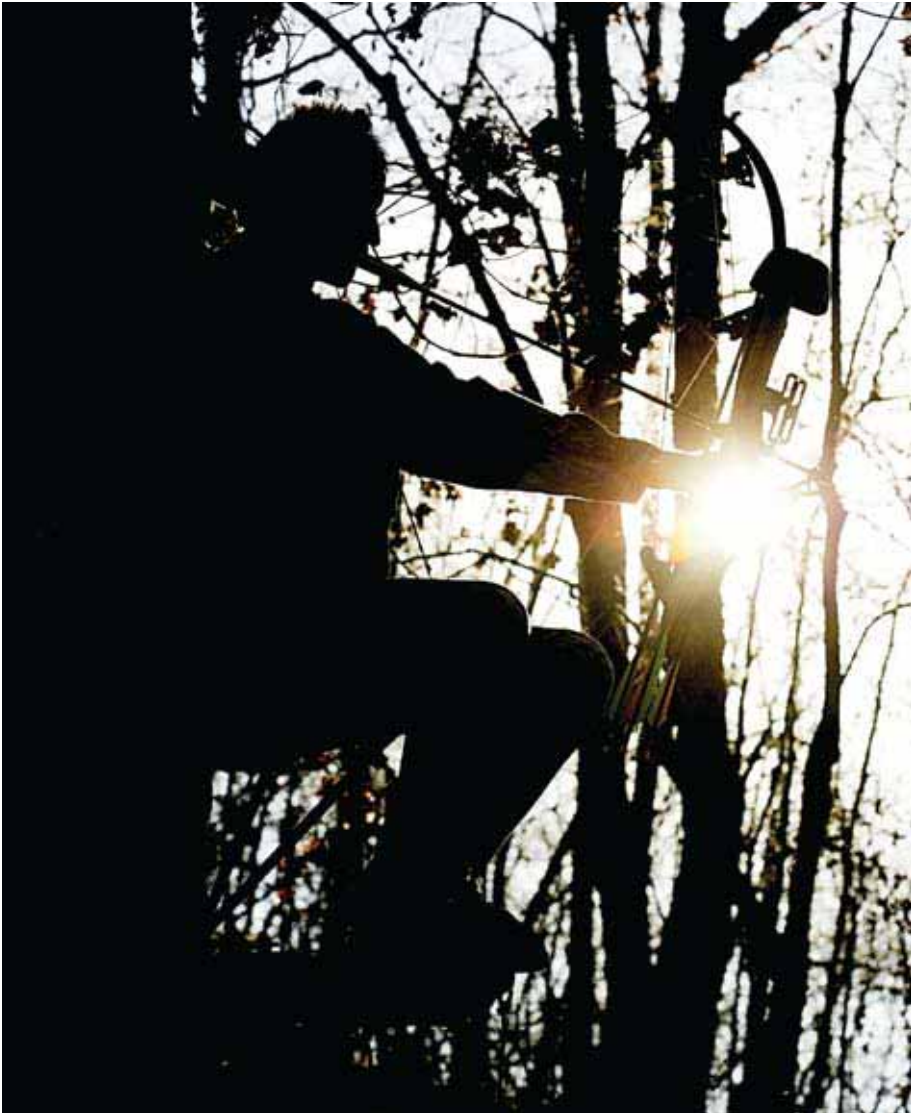
The magazine continues to be free to Missouri residents and is mailed to approximately half a million people. Surveys indicate about 1.5 million people read the *Conservationist* every month.

Missourians not only receive the magazine they support the publication by writing and submitting articles, sharing and implementing their conservation ideas and offering their positive criticism to improve the publication. As Mr. Stephens said in the very first issue, “suggestions as to the subject matter of future issues are solicited.” That statement is still true today as we look to citizens to help guide the magazine's future. It truly is YOUR magazine and we encourage you to submit your thoughts, suggestions for improvement and ideas for articles. The “experiment” that started the *Missouri Conservationist* has evolved into a flagship publication that promotes conservation throughout Missouri and America.

Tim Ripperger, assistant director



OUR MISSION: *To protect and manage the fish, forest and wildlife resources of the state; to serve the public and facilitate their participation in resource management activities; and to provide opportunity for all citizens to use, enjoy and learn about fish, forest and wildlife resources.*



Cover: White-tailed deer by
Noppadol Paothong
Left: Bowhunter by Cliff White

NextGEN

This section reports on goals established in *The Next Generation of Conservation*. To read more about this plan, visit www.MissouriConservation.org/12843.

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MONARCHS

Thank you for the beautiful cover story

about monarch butterflies [*Majestic Monarchs*; September]. Monarch butterflies have suffered devastating losses in recent years. Bad weather conditions and loss of habitat in their winter grounds in Mexico have taken a severe toll on the population. In addition, here in the north we continue to eliminate their host plants when we clear land for housing, commercial development, or farming. However, there is something each one of us can do to help. We can plant milkweed. Monarch butterflies will only use plants of the genus *Asclepias*, the milkweed family, as host plants to lay their eggs and feed on as caterpillars. Whether we live in urban, suburban or rural areas, we can plant common milkweed or butterfly weed, both perennial and quite lovely,

in our gardens and help to give the monarchs a place to breed. For more information, or to get milkweed seeds, readers may contact: Live Monarch at: www.livemonarch.com. Monarchs need milkweed to survive. Plant *Asclepias*!

Alice Sanvito, St. Louis

Editors' note: For more on monarchs, visit: www.MissouriConservation.org/kids/out-in/2004/08/1.htm. Also, the Bill Roston Native Butterfly House at Close Memorial Park in Springfield is open for viewing the monarch life cycle in a real-life environment complete with host plants. The operating season is May 15 through Sept. 30, admission is free. For more information, call Dr. Bill Roston at 417-683-3733 or 417-593-3414.

WE'LL MISS YOU, BEN!

For the past three years, we have lived in Springfield and have enjoyed the extraordinary beauty

of the nature center. Our son, Ben, has down syndrome and autism and our daily walk together at the center is one of the highlights of his day and of ours. The staff are always friendly and helpful. The site is beautifully maintained. Ben likes to sing Christmas songs as we walk along the paths and our fellow walkers have been gracious. I think even the turkeys are now used to hearing "Frosty the Snowman" in the middle of August! Now that we are preparing to move to California, I had to let you know how deeply we have appreciated this amazing community resource and will very much miss our daily walks. The conservation efforts of this state are among the things that we treasure most about it. Please convey our thanks to the staff at the Springfield Conservation Nature Center.

Jeff Hittenberger, Springfield

ASK THE OMBUDSMAN

On Aug. 7, my 4-year-old daughter, Faith, and her 6-year-old cousin, Mitchell, were in our backyard playing. My husband went out to get them for lunch, and they were standing in front of a big bush. My daughter was holding onto a stem with little green and purple berries on it. She popped one into her mouth. Then panic set in; my husband had no idea what type of plant this was. I was on the phone contacting poison control, the children's pediatrician and my nephew's mom. At this point, we still had no idea what this plant was. My father-in-law suggested that we also contact the Conservation Department. I grabbed our magazine and found "Ombudsman questions." My husband called and spoke with Tim Smith. Tim was able to identify this plant almost immediately as elderberry. The pediatrician's office called us back and I told them that we received our information from the Conservation Department. The nurse said this was an excellent source. Huge thanks to you, Tim Smith, and to the Department!

Shannon Tiller, Winfield



Reader Photo

SITTING PRETTY

Garry Mainer of St. Louis captured this image while on a duck hunt in southeast Missouri. "This photo," said Mainer, "is one of the reasons we hunt. The scenery is just awesome." Mainer said he and his buddies have hunted together for more than 20 years and lease some land from an area farmer. "The partnership we have established with different farmers has been very rewarding," said Mainer.

CORRECTION

The great horned owl in October's Haunted Habitats article was provided courtesy of Raptor Rehabilitation Project of Columbia. We regret the error.



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Discover more about nature and the outdoors through these sites.

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Kid's site (beginning February 2010):
www.xplormo.org
MDC Web site: www.MissouriConservation.org

Missouri Conservationist Web site:
www.MissouriConservation.org/3939
Nature Shop: www.mdcNatureShop.com
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www.twitter.com/Nature_Videos
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New Kids' Magazine



XPLOR will ignite children's curiosity unlike any other nature magazine. Six times a year we'll bring you eye-popping art, photos and stories about Missouri's coolest critters, niftiest natural places, liveliest outdoor activities and people who've made a living in the wild. Don't keep the door closed another minute. Come outside with us and **XPLOR!**

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HEALTHY FORESTS

Don't Move Firewood!

If you are planning a hunting and camping trip, be sure to leave firewood at home and don't bring firewood home after hunting or camping. The hundreds of thousands of Missourians who hunt deer and other game could unintentionally spread the emerald ash borer, a devastating forest pest, if they cart firewood from place to place. Foresters urge all hunters to buy firewood where they camp and burn it all before returning home. For more information about emerald ash borers and other forest pests, visit www.MissouriConservation.org/18442.

LANDOWNER ASSISTANCE

Renew CRP Contracts

Over the past 20 years, the federal Conservation Reserve Program (CRP) has created millions of acres of upland and wetland wildlife habitat by taking highly erodible farmland out of production. In the next four years, CRP contracts will expire on nearly 1 million of the 1.4 million acres of Missouri land currently enrolled. If all that land is put back into row crops and grazing, quail, pheasants, ducks, deer and turkeys

and those who love them will be losers.

Landowners can prevent this in any of three ways. One is re-enrolling land in CRP during the next general sign-up. This might be even more attractive than before, as the CRP rental rates have improved. Check with your USDA Farm Service Agency Office to learn the new soil rental rate.

If you do take your land out of CRP, consider improving profits by leaving borders along the field edges and wide buffers around streams and ponds. You may be able to enroll these sensitive

areas in practices such as CP21 Filter Strip, CP22 Riparian Forest Buffer and CP33 Habitat Buffer for Upland Birds. You still receive annual payments for enrolling field edges in these practices. The payments actually can be higher, thanks to sign-up incentives. In some cases, you also can receive up a 90-percent cost share to establish approved vegetation.

A recent study from the MU Food and Agricultural Policy Research Institute showed that farmers come out ahead when they enroll their crop field edges into Continuous CRP practices such as CP33. For a complete report visit: www.fapri.missouri.edu.

A third way of keeping CRP's wildlife benefits is to simply leave expired CRP fields in grass for haying and grazing. You can still take advantage of Continuous CRP practices if you fence CRP buffers from livestock.

Other USDA programs, administered by NRCS, such as the Wildlife Habitat Incentive Program and the Environmental Quality Incentive Program help landowners develop better grazing systems and wildlife habitat. In Missouri, these programs provide funds for installing conservation practices. CRP fields might also qualify for the Grassland Reserve Program or Conservation Stewardship Program. Contact your NRCS Office for more information.

CONSERVATION EDUCATION

Holiday Gift Ideas

At a loss for a gift for the hunter, angler or nature lover who has everything? Consider getting something close to their hearts. Conservation-related holiday gift ideas include 2010 hunting and fishing permits. If that is too mundane, how about a *Natural Events Calendar* or a *Missouri's Outdoor Heritage Calendar* from The Nature Shop?

You can browse through the full selection of Nature Shop merchandise, including books, greeting cards, DVDs, CDs and more at www.mdc.natureshop.com. If you still have the October *Conservationist*, check out the Nature Shop section in the center of the magazine. Many Nature Shop items are available at conservation nature centers, or online, or by calling toll-free 877-521-8632.

Also, don't forget to sign up youngsters for a free subscription to *Xplor*, the new conservation magazine for kids, at www.xplormo.org.

PLANTS & ANIMALS

Deer Baiters Beware

So what if you throw out some corn before deer season to improve your chances of success? Others are doing it, and who's going to know?

You might be surprised, as dozens of Missourians are each year when conservation agents greet them on opening morning. Agents routinely use the Conservation Department's helicopter to find bait sites. How do they know where to look? Law-abiding hunters and disgusted neighbors

who don't appreciate game cheaters tell them exactly where to look. In addition to citizen tips, conservation agents' experience enables them to predict with surprising accuracy where and when baiting will occur.

You can report known or suspected baiting by calling the toll-free Operation Game Thief hotline, 800-392-1111.

CONSERVATION EDUCATION

East-West Meeting

Six Chinese scientists from the Yangtze Water Resources Commission visited southeast Missouri in August. Their goal was to exchange information with Conservation Department

scientists about the management of big rivers.

The visitors were particularly interested in the Missouri Trawl, a gear developed by Open Rivers and Wetlands Field Station scientists to catch fish in deep, swift rivers. The system incorporates nets with different mesh sizes to reduce the passage of small fish through the net and to prevent larger fish crushing smaller ones.

After seeing the gear in action, the Chinese scientists were eager to go home and adapt the system for their boats and rivers. They also learned about the middle Mississippi River, its plants, animals, wetland management, restoration, and efforts to save the endangered pallid sturgeon.

Conservation Department Resource Scientist
(continued on Page 6)



ASK THE OMBUDSMAN

Q: What are the regulations regarding persons taking antlers from road-killed deer?

A: The *Missouri Wildlife Code*, Chapter 10, states that "Any person who finds a dead deer with antlers still attached to the skull plate while afield and takes those antlers into possession must report the taking to a conservation agent within twenty-four (24) hours to receive possession authorization. Shed antlers not attached to the skull plate found while afield may be possessed, bought and sold by any person without possession authorization." That means that a person sawing off antlers from a road-killed deer must receive authorization within 24 hours from a conservation agent to legally possess the antlers. The same is true for a person hitting a deer with a vehicle and wishing to keep the deer. They must contact a conservation agent to receive authorization to legally possess the deer.

Q: I've noticed large numbers of circling vultures in the sky during the fall. Can you explain their behavior?

A: Missouri's two vultures, the turkey vulture and the black vulture, both move south in the fall. They

overwinter from southern Missouri to the Tropics. Vultures will gain elevation by circling in "thermals," zones of rising warm air resulting from the sun warming the earth. A gathering of circling birds is called a "kettle." Once sufficient altitude is gained, they will glide south for a great distance with minimal effort, losing altitude gradually. Then they will find another thermal and circle upward for the next glide. November is a good time for observing vultures and hawks moving south by riding thermals.



Turkey vulture

Ombudsman Tim Smith will respond to your questions, suggestions or complaints concerning Department of Conservation programs. Write him at PO Box 180, Jefferson City, MO 65102-0180, call him at 573-522-4115, ext. 3848, or e-mail him at Ombudsman@mdc.mo.gov.

Bob Hrabik traveled to China in May 2008 at the invitation of The Nature Conservancy. He was part of an eight-member U.S. scientific team that shared experiences with Chinese river managers and scientists from two universities and seven government agencies.

"During the Chinese scientists' visit to southeast Missouri, our scientists presented results of monitoring and restoration work on the upper Mississippi River," said Hrabik. "We emphasized methods and infrastructure. In return, our scientists obtained firsthand knowledge of the Yangtze, the Three Gorges Dam and its reservoir and ongoing work there. This scientific exchange is very exciting because it affords researchers and managers a chance to better understand ecological processes and better ways to manage the Mississippi and Yangtze rivers."

Hrabik said the visit will encourage the Chi-

nese scientists to explore ways to work with their Missouri counterparts on problems of mutual concern. This will lead to better understanding their respective systems and, eventually, to better river management in Missouri.

PLANTS & ANIMALS

Swan Killers Draw Stiff Penalties

Quick action by hunters with cell phones has led to convictions and serious penalties for seven men who shot trumpeter swans last year.

Conservation agents' phones began ringing moments after seven hunters opened fire on the huge, white birds at Eagle Bluffs Conservation Area on Dec. 30, 2008. Several groups of hunters were outraged when they witnessed the shooting of the swans—North America's largest waterfowl and a species of conservation concern.

Armed with detailed information from hunters, agents were waiting for the seven offenders as they left the conservation area.

Those who pleaded guilty were: Ross Bullard, 18, Hartsburg; Steven Johnson, 48, Columbia; Gregory McCoy, 20, St. Louis; Cary Morrison, 38, St. Louis; Jonathan Thornburgh, 31, Maryland Heights; and Terry Thornburgh, 53, Bridgeton. They each paid \$750 in restitution to the Trumpeter Swan Society, plus \$118.50 court costs. All received \$1,000 fines and had their hunting privileges suspended for one year.

The remaining offender, Kody Kile, 20, Ashland, pleaded not guilty. However, the judge found him guilty, fined him \$1,000 plus \$118.50 court costs, and suspended his hunting privileges for two years. The judge also ordered Kile to pay \$750 in restitution to the Trumpeter Swan Society and perform 20 hours community service.



Black bear

OUTDOOR RECREATION

Bear Killing Calls for Awareness

The illegal killing of a mature female black bear in Webster County in September underlines the fact that Missouri has a growing bear population. The reward offered for information leading to the conviction of the bear killer emphasizes the fact that Missourians value wild black bears, which are protected wildlife by the *Wildlife Code*.

Black bears are naturally shy of humans and seldom pose a threat unless cornered or surprised. While people can legally protect themselves, pets or livestock from imminent threat by bears, killing them under other circumstances can lead to hefty fines.

If you encounter a bear at close range, avoid making eye contact. Back away slowly while talking in a calm, normal voice. If a bear approaches your campsite and shows no fear, get in a locked vehicle and contact the nearest conservation agent (see Page 3 for regional office phone numbers) or law-enforcement agency. For more information about preventing problems with black bears, visit www.MissouriConservation.org/7835.

“I AM CONSERVATION”

Leaving a Conservation Legacy

by David McAllister &
Kit Freudenberg

Wade and June Shelton of Joplin enjoyed watching birds in their backyard and could be seen strolling along Shoal Creek. Before retirement, Wade worked as a receiving clerk with Vickers Hydrolics. June worked a number of years as a programmer for a local television station. Having no children, they wanted their legacy to be one that would provide Missourians with additional outdoor opportunities and at the same time preserve natural habitat for Missouri's wildlife. To make their plans become a reality, they selected the Missouri Department of Conservation as beneficiary of their estate and, in 1983, began working with Department staff to ensure that their lifetime of savings would be used to fund a land purchase to benefit southwest Missouri and its residents. “No bits and pieces,” Wade said.

June passed away in 1983, not long after the couple's first contact with the Department. Wade passed away in October 2007 following a short illness. Through saving and sound investments, the Sheltons left a gift of more than \$1,007,000. The Sheltons desired that either prairie or forest land in southwest Missouri be purchased with their gift. In June of this year the Department acquired a 320-acre tract in Dade County that consists almost entirely of native prairie. The tract is known to provide nesting, brood rearing and escape cover for a flock of greater prairie chickens. Once opened, the area will be known as the Wade and June Shelton Memorial Conservation Area to honor the conservation legacy of these two Missourians. ▲



Wade and June Shelton

DEER SEASON CLOSED
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AGREEMENT, WITH
MISSOURI CONSERVATION COMMISSION





Evolution *of* **DEER** Management

Balancing populations for healthy herds, good hunting and citizen safety requires looking back, looking forward and staying flexible.

by JASON SUMNERS

Deer hunting regulations in Missouri have changed a great deal since 1944, when 7,757 hunters harvested 519 bucks during a two-day buck-only season. Today there are approximately 500,000 deer hunters in Missouri harvesting nearly 300,000 deer annually. The Conservation Department's deer management goal is to maintain a statewide deer population level that provides adequate opportunities for hunters and for people who enjoy watching deer, but low enough to minimize crop/landscape damage and deer-vehicle accidents. This goal hasn't changed, but as deer populations and public attitudes toward deer have changed, so have management strategies.

Management History

Aldo Leopold wrote, "Few biological arts depend as much on ingenuity and resourcefulness as the art of game management." Managing a deer population is about more than the biology and ecology of the species; it is the art of balancing the needs of society within the realities of the natural world.

In the late 1920s and early 1930s several efforts to restore deer numbers were made, but they were unsuccessful. It wasn't until the formation of the first Conservation Commission in 1937 that restoration efforts began to bear fruit. One of the first actions of that commission was to prohibit deer hunting. Finally, in 1944, with an estimated population of 15,000 deer, a two-day forked-horn, buck-only firearms season was held.

Antlerless Harvest

Antlerless harvest is the most effective tool for managing deer numbers. As deer populations in Missouri steadily increased, biologists began to liberalize seasons to control the rate at which deer populations grew. The liberalization of the antlerless harvest has driven many of the regulations changes over the past couple of decades. Today we have antlerless permits in nearly every county including an antlerless-only season. The general trend has been to make antlerless permits more accessible and increase hunting opportunities.

Antlerless permits have been successful in reducing deer numbers in many rural areas. Deer overabundance is less of an issue in rural

“Few biological arts depend as much on ingenuity and resourcefulness as the art of game management.”
—Aldo Leopold



Missouri than it has been in the past, although hot and cold spots continue to occur. On the local level, deer numbers are affected by the number of hunters, patterns of land ownership, access to hunting land, posted property, etc. Outbreaks of epizootic hemorrhagic disease, an irregularly occurring event, can also play a big role in reducing local deer populations. We estimate that up to 20 percent of the deer herd was lost in some areas during past outbreaks. Some of the areas hit hard by the 2007



outbreak had also seen hemorrhagic-related deaths in 2005 and 2006.

Unlimited antlerless permits and additional opportunities to harvest antlerless deer do not constitute site-specific harvest recommendations but provide the flexibility for landowners and hunters to make the management decisions that are appropriate for their individual situation.

An appropriate level of doe harvest is the key to successful deer management. In some areas, harvest pressure exceeds the growth rate of the

population and a regulation change is necessary to reduce doe harvest. In 2008, in response to declining deer numbers in southwest Missouri, several counties were changed from unlimited firearms antlerless to one antlerless permit in an attempt to reduce doe harvest and allow populations to recover.

Buck Harvest

Buck-only seasons were a popular management tool for biologists when deer populations

Deer regulations have changed a great deal since this buck was taken in 1948.



in Missouri were small and increasing deer numbers was desirable. Buck harvest generally has little impact on the growth of deer populations, while providing harvest opportunities. However, if buck harvest is too intense, it can have negative impacts on the population as it changes buck age structure, sex ratios and timing of breeding.

In 2004, antler point restrictions were instituted to shift harvest pressure from bucks to does and has the potential to decrease the proportion of does in the population and reduce the total number of deer that need to be harvested to maintain stable populations. Additionally, antler restrictions reduce yearling buck harvest resulting in the recruitment of more bucks into older age classes. Antler point restrictions were successful in meeting the goal of reducing the harvest of yearling bucks and have increased doe harvest in central Missouri. Due to the success of reducing yearling buck harvest, increased doe harvest in some areas and widespread popularity, antler point restrictions were expanded from 29 counties to 65 in 2008.

The new APR counties followed a trend similar to the counties added in 2004. We saw a 32-percent decrease in buck harvest in the new APR counties north of the Missouri River and a 38-percent decline in west central Missouri, while doe harvest increased 4 percent and 15 percent, respectively. Despite the overall decline in the total number of deer harvested in 2008, doe harvest increased 2 percent, while buck harvest declined 21 percent. This means there is increasingly a larger proportion of adult bucks in the population and fewer does.

Season Length and Timing

Another method biologists use to affect the age and sex structure of the harvest is to adjust the season length and timing. Hunting seasons historically occurred over very short time periods and coincided with the peak of the rut. Placing the November portion of the firearms season in the peak of the rut was an effective management tool that allowed the harvest of bucks during

Biologists adjust the hunting season length and timing to affect the age and sex structure of the harvest.

their most vulnerable time, while not limiting the growth of the population. Buck harvest during the November firearms portion is closely tied to the peak of the rut, with an earlier opening to the November portion tending to result in greater buck harvest than later openings. Additionally, there is evidence that antlerless harvest increases with a later season opening as hunting pressure shifts away from bucks to does. Now that deer populations are well established, our management strategy must shift away from one of increasing deer numbers toward managing for stable populations. Altering the opening of the November portion of the firearms season may contribute to our ability to manage for stable populations.

One common reason for lack of participation in the hunting season is time. Today, hunting seasons range over much longer periods and include a variety of methods. The expanded seasons allow for greater opportunities, as well as reducing hunter densities and conflicts.

The management of deer in our cities is one of the biggest management challenges in Missouri. Deer are extremely adaptable and are able to thrive in developed areas. Lack of hunter access and city ordinances against the discharge of bows and guns in urban areas limits our ability to use hunting to manage these populations. Department field staff work with city councils and other organizations to address these management issues and have been successful in increasing hunting opportunities in many urban communities. We will continue to look for new ways to manage urban deer populations.

Citizen Effort and Influence

Ultimately, landowners and hunters are the key to management of deer populations. They are the ones who control harvest and dictate local deer numbers. So developing hunting regulations that meet the needs of all Missourians is important. Dale McCullough, author of the wildlife management classic, *The George Reserve Deer Herd*, wrote that a successful manager "... will be dependent upon his ability to listen. His finger must seek the pulse of society, and not his own."

The Conservation Department is teaming with groups of landowners and hunters to help manage deer populations. We place a great deal

of value in, and devote a considerable amount of time and resources to, monitoring the attitudes of landowners and hunters. In addition to biological data, public meetings, scientific attitude surveys and comments taken by field staff all play an important role in the management decision-making process.

Successful deer management requires flexibility to changing conditions. It is important that we continue to anticipate changes in hunter participation and behavior, land access, and patterns of landownership, and acknowledge the increasing urbanization of the landscape. Declining numbers of hunters, limited access to deer on private lands and decreasing willingness of hunters to harvest antlerless deer present significant challenges to controlling deer populations in the future. Deer management must continue to evolve in order to meet those challenges. ▲

Landowners and hunters are the key to management of deer populations, which is why MDC places a lot of value and time in monitoring their attitudes.







Saving Our Best Streams

The Stream Stewardship Trust Fund helps protect Missouri's best streams.

story by CAROL DAVIT, *photos by* NOPPADOL PAOTHONG

SHORTLY AFTER ARRIVING to work in Missouri from his home state of Wisconsin, Fisheries Management Biologist Kevin Meneau took his family to explore LaBarque Creek in Jefferson County. “They fell in love with it,” says Meneau. “The stream has waterfalls, deeper pools for fishing and shallow riffles that kids love to play in.”

These stream features are lovely to look at and also provide habitat for an astonishing 44 kinds of fish within its six miles of permanent flow. Nearby streams of the same size—but of lesser quality—average just 12 fish species.

LaBarque's surrounding 8,365-acre watershed is just as impressive, says Meneau. “There are moist box canyons, delicate sandstone cliffs, desert-like glades and a variety of forest types.” All of these natural communities support several hundred known species, from ferns to fish to birds—documented by agency biologists and volunteer botanists, birders and other naturalists. And it's all a half-hour's drive from the Arch.

LaBarque Creek and its watershed is one of the most biologically rich areas in eastern Missouri. The Stream Stewardship Trust Fund has provided more than \$1 million to help keep it that way.



The Stream Stewardship Trust Fund helps protect high-quality streams such as LaBarque Creek (above), not only so that aquatic wildlife have a place to thrive but so these beauty spots can be conserved for children and families to explore and enjoy.

The LaBarque Creek watershed is one of the most biologically diverse areas in eastern Missouri, but its proximity to St. Louis makes it especially vulnerable to development. Biologists are not the only ones who think this is a special place. Many of the watershed's 1,400 landowners are working hard to preserve its beauty and biological integrity. They, along with Conservation Department staff, Jefferson County officials and many conservation groups, began working together in 2002 to find ways to protect the watershed. One of those ways turned out to

be the Stream Stewardship Trust Fund managed by the Missouri Conservation Heritage Foundation.

The Trust Fund is an in-lieu fee stream mitigation program. If a developer impacts a Missouri stream, in many cases, he or she must mitigate for that damage. One way to mitigate is to pay a fee to the Trust Fund, which in turn puts the money to work to protect Missouri's best streams.

To date, the Trust Fund has provided nearly \$1 million to protect the LaBarque Creek watershed, which has been identified by the Conservation Department and other Missouri conservation partners as a conservation opportunity area—a place where we have the most biological diversity to lose it if isn't conserved.

"What LaBarque Creek has are the Big Three needed for high stream quality," says Meneau: "An intact watershed with 88 percent forest coverage; a natural, unchanneled stream; and protected riparian corridor. LaBarque



Creek is a shining example of why in-lieu fee stream mitigation works.”

Development, Conservation and the Clean Water Act

Missourians across the state can relate to Meneau and LaBarque Creek watershed residents—we love our streams. But we also value our homes, sidewalks, bridges, businesses, schools and roads—the construction of which can harm the creeks and rivers we care about.

With any new development project, land will be disturbed and streams could be affected. Construction site erosion, dredging or other stream engineering can clog a section of stream with sediment and impact the movement of fish, or threaten the survival of other aquatic life. The federal Clean Water Act was designed to safeguard America’s water resources from developmental impacts,

Investing in Your Conservation Legacy

The Missouri Conservation Heritage Foundation is a nonprofit, charitable organization created in 1997 to meet financial demands placed on Missouri’s natural resources. It advances the conservation and appreciation of Missouri’s forest, fish and wildlife resources by matching financial resources with the priorities of donors, the Foundation and the Missouri Department of Conservation. The Foundation receives funding not only from the Stream Stewardship Trust Fund but also from Conservation Heritage license plate sales, grants and individual donations.

“Missourians are fortunate to have the conservation sales tax to help fund worthy projects and activities of the Department,” says Foundation Director Rick Thom. “But sales tax revenues are tied to the economy and cannot always keep pace with needs.”

This is why the Foundation was created—to provide an additional stream of revenue for conservation, and to provide donors with an easy way to contribute to conservation initiatives that are important to them. “If you love fishing and you want to help fund fishing opportunities for kids, you can earmark your donation for that,” says Thom. “The same goes for stream protection, hunting clinics, hiking trails, bird habitat protection and scores of other projects—we help donors invest in the kind of conservation legacy they want to leave for others.”

From all funding sources to date, the Foundation has raised more than \$8 million. Conservation Department staff members apply for Foundation funding for projects they initiate or that they endorse on behalf of partner groups. These projects immediately address conservation and outdoor recreation needs. The Foundation board of directors—composed of conservation, community and business leaders—oversees funding decisions.

“The Missouri Conservation Heritage Foundation provides an excellent charitable option for people who are committed to conservation and outdoor recreation,” says Julius Wall, Foundation president. “People



Investing In Your Conservation Legacy
WWW.MOCHF.ORG

support us with individual donations or by purchasing a conservation heritage license plate. We invite all who love Missouri to leave a better conservation landscape for future generations.”

or require developers to mitigate, to make amends for unavoidable stream damage by providing for the protection or restoration of a stream somewhere else.

The U.S. Corps of Engineers is the federal agency responsible for issuing permits required under the Clean

Water Act's Section 404, which regulates development activities that can impact streams and wetlands. An agreement signed in 2000 between the Corps and the Missouri Conservation Heritage Foundation allows the Foundation to collect mitigation fees from developers and use the funds to protect and restore streams in priority watersheds.

Paul Calvert, stream services program supervisor with the Conservation Department and Trust Fund Committee member, says, "The Trust Fund has helped developers get needed work done, and at the same time their mitigation fees have funded more than 55 projects around the state. The fees aren't being spent randomly but very strategically in watersheds that, without protection or restoration, have the most to lose in terms of their biological diversity, fishing potential or because they provide a source of drinking water for people."

A Voluntary and Wise Mitigation Option

Mitigation fees from developers to the Trust Fund usually range from \$10,000 to \$200,000, depending on the amount of damage from a project. That sounds like a lot of money, but it is often less than other mitigation options, or the future income lost by forgoing development. The fees are realistic considering the benefits that healthy streams provide to society.

"Mitigating through the Stream Stewardship Trust Fund is completely voluntary," says Julius Wall, president of the Missouri Conservation Heritage Foundation. "Developers have other options in meeting their Clean Water Act obligations. But paying into the Trust Fund is often easier, less expensive and does the most good for conservation of high-quality and priority streams in Missouri." In addition, the Foundation accepts all liability for the developer to fulfill the mitigation requirements.

Landowners' Love of Land Protects Stream and Drinking Water

Thomas Mohan and his wife, Rebecca, have lived on their farm in Macon County for 30 years. They love the natural beauty of Long Branch Creek, which flows through their 88 acres, and the forested corridor that flanks the stream. "We want to be sure this land is not developed—no matter who might own it in the future," says Mohan. "We want it to stay the way we have enjoyed it."



Private landowner Robert Wyatt on the easement of his property near Long Branch Creek.

When Mohan learned about the Stream Stewardship Trust Fund from Fisheries Management Biologist Darren Thornhill, he understood that this funding source might allow him to fulfill his conservation plans for his land. Thornhill and other conservation professionals are eager to help landowners who want to conserve their land, which helps with statewide conservation goals. Protecting Long Branch Creek is especially important because it flows into Long Branch Lake, which provides fishing opportunities and drinking water for the city of Macon and surrounding rural areas.

The project received Trust Fund dollars, which paid for a perpetual conservation easement on 22 acres of Mohan's land and construction of a reinforced rock crossing over the creek. "Mr. Mohan might have put in a culvert to create a stream crossing," says Thornhill, "but that would have impeded fish movement in the stream and created erosion." Now, with his fish-friendly crossing, Mohan can access the 25 acres across the stream and manage the riparian forest there to further benefit Long Branch Creek.

Mohan told his upstream neighbor, Robert Wyatt, about the Stream Stewardship Trust Fund. "He was so enthusiastic," says Mohan, "he nearly beat me in getting his project completed." With assistance from Thornhill, Trust Fund dollars enabled a perpetual easement along Wyatt's 42 acres of stream frontage, as well as two stream crossings.

Wyatt, along with his son and grandsons, uses his 151-acre property for hunting. "I don't intend for the land to be farmed," says Wyatt, "I maintain it for wildlife." The protected riparian corridor, as well as his 20 acres planted with warm-season grasses, will ensure that Wyatt continues to enjoy quail, deer and turkey on his property. And all the while, he is protecting the quality of a Missouri stream that contributes to the welfare of thousands of citizens downstream.

One developer that has taken advantage of the Trust Fund is the Missouri Department of Transportation. Buck Brooks, wetland coordinator for the Transportation Department, oversees his agency's compliance with Section 404 of the Clean Water Act. "The Trust Fund has definitely been a good option for us in terms of mitigating for small impacts, especially when we have been unable to do on-site mitigation," says Brooks.

"For example, if a road is going to be widened, a culvert under a road at a stream crossing has to be widened as well. Extending a culvert on a small stream will have a small but definite impact and needs to be accounted for. But sometimes it has been difficult to find a landowner willing to sell a small amount of land adjacent to where we have made an impact for on-site mitigation, and even if we can find the land, we are not resource managers. Managing more land and monitoring the success of the mitigation takes staff time away from what we are tasked to do for Missourians—provide transportation."

Putting the Fees to Work for Streams

Since 2000, the Foundation has collected more than \$4 million in mitigation fees and put these funds to work restoring and protecting high priority streams like LaBarque Creek and many others around the state. Missouri Department of Conservation staff, often working with partner groups or landowners, submit proposals to request Trust Fund dollars for stream projects. These projects have included replacing low-water bridges with fish-friendly crossings, acquiring land, restoring eroded banks, fencing cattle out of streams and buying or accepting donated conservation easements in riparian areas. A committee of Missouri Conservation Heritage Foundation board members and Conservation Department staff reviews projects before they are approved by the Foundation.

Each stream project done on private land requires a minimum 30-year commitment, whereby Trust Fund dollars pay a landowner for restoration, enhancement or other expenses. The commitment is backed by a binding agreement or an easement along the stream. The Conservation Department holds the easements, and staff monitor success of a project and compliance with the terms of the easement.

Land acquisition projects for public ownership to preserve unique streams must be approved by the Conservation Commission. Trust Fund dollars have added hundreds of acres of riparian forest and hundreds of feet of stream frontage throughout the state, including along LaBarque Creek, the Big Piney River and Mill Creek, a blue ribbon trout stream. These acquisition projects not only help protect streams but put more land in the public trust for the enjoyment of citizens. ▲



A green heron captures a crayfish. Both of these species depend on healthy streams to thrive.



NOPPADOL PAOTONG

ON Point FOR Quail

story by AARON P. JEFFRIES

We steer toward a Missouri Quail Emphasis Area for emphatically fun hunting experiences.



German short-hair pointers, Gretchen and Babe, help Aaron Jeffries hunt for quail on a Quail Emphasis Area.



NOPPADOL PAOTTHONG

Bobwhite quail

Greta and Babe crept to a halt and stood motionless in a patch of golden brown native grass. Just ahead, our third German short-hair pointer, Gretchen, had sensed game and, nose hovering just above the ground, stood frozen on point in front of a wild plum thicket.

Dad and I slowly walked in, expecting a covey of quail to explode from the grass. At the exact moment I was asking Dad where they could be, the grassy cover at our feet started shivering and a rumble of wings filled the air. I swung my 20-gauge on a pair of brown blurs and fired twice, dropping one of the bobs. Dad, who is usually more patient and steady when shooting, knocked down two.

The three pointers meticulously scanned through the grass and ragweed until they retrieved our birds. Mine was a young rooster. Its black and white head matched perfectly with its buff brown and gray body feathers.

With our first point and covey rise, as well as the three birds in pockets, so to speak, our quail season was now officially open. For the next several hours we chased singles and bumped into three more coveys as we worked our way through the mosaic of grassy fields, food plots, woodlots and shrub thickets at the conservation area. We harvested more birds, and despite being exhausted and covered with sticktights, we had some fun. Apparently, the Quail Emphasis Area we were hunting was doing exactly what it was designed to do.

EMPHASIS ON QUAIL

In 2004 the Conservation Department established 19 conservation areas as Quail Emphasis Areas (see table). These areas demonstrate how good quail habitat management practices can increase quail numbers and provide quality quail hunting experiences.

The long-term goal for Quail Emphasis Areas is a density of one quail per 2 acres in the fall before the hunting season. Quail numbers are estimated each October based on a predawn whistling survey. Managers survey quail and grassland birds again in May and June during the breeding season. In recent years, quail numbers have been down on Quail Emphasis Areas likely due to cold, wet springs and severe ice and snow storms.

Quail Emphasis Areas were selected based on existing habitat qualities, public demand and size of the area. Intensive habitat-improvement efforts on the areas include using prescribed fire and strip disking to open up bare ground and promote annual plants, creating brood habitat for young quail.

Area managers also remove cool-season grasses such as tall fescue and smooth brome to make it easier for quail to walk on the ground, and they plant low-growing shrubs to provide escape cover for quail coveys. They also strip-disk old fields and plant warm-season grass stands to encourage annual plants and insects, which are a vital food source for young quail.

Other quail management techniques include edge feathering and brush-pile construction to create winter and escape cover between open land and forest. Additionally, area manag-

ers restore natural communities that provide good habitat such as such as glades, woodlands, savannas and prairies.

These aren't the only conservation areas where hunters can find quail. As a part of the Strategic Guidance for Northern Bobwhite Recovery (Missouri's quail recovery plan), the Department is working to improve quail and grassland bird habitat on many conservation areas. In fact, the Missouri Department of Conservation completes approximately 80,000 acres of quail-friendly habitat work each year on conservation areas throughout the state. Of that, about 12,000 acres of habitat work is completed on the Department's 19 Quail Emphasis Areas.

OUTSMARTED!

Two weeks later, I returned to the same conservation area to try my luck again. This time,

A Conservation Department area manager cuts trees around field edges to improve quail habitat.



CLIFF WHITE

I was alone with the dogs. I was excited because I thought I knew the locations of at least four coveys. That late in the season, I figured hunting pressure would have moved the birds to heavier cover.

My strategy was to hunt the thick woody draws where most hunters don't venture. Many of these draws were impenetrable, as trees had been purposely cut down and left as habitat for quail and rabbits—a habitat practice sometimes called edge feathering. The strategically cut woody cover provides ideal escape and winter cover for quail and other wildlife.

Showing a little common sense, I walked along the edge of the nearly impassable woody draw and let the dogs search the thick stuff.

Greta, the “edge specialist,” also decided to run the edge just in front of me and leave the hard work for Babe and Gretchen.

Ahead of us fluttered cardinals, juncos, finches and a variety of winter sparrows. Occasionally, a cottontail rabbit darted out of the thick cover. One jumped out from underneath Babe's feet and briefly distracted her from the hunt. Good quail cover provides great habitat for lots of wildlife.

I spotted Babe creeping on her belly, and then she disappeared into a cluster of downed tree branches and shrubs. I walked up and—thanks to her orange collar—found her on point in the middle of a blackberry patch. I winced as I walked in, my hunting chaps being no match for the sharp thorns. I shuffled my feet but noth-



Most Quail Emphasis Areas are subject to statewide regulations for quail hunting. A few areas have some hunting restrictions in order to protect the quail population from heavy hunting pressure, but first check the *Wildlife Code* for any restrictions. For additional information on Quail Emphasis Areas, call the phone numbers for the areas shown below, or visit www.MissouriConservation.org/16802.

Quail Emphasis Area	County	Regional Office Phone Number
Bois D'Arc	Greene	Southwest 417-895-6880
Bonanza	Caldwell	Northwest 816-271-3100
Bunch Hollow	Carroll	Northwest 816-271-3100
Cover Prairie (Dan and Maureen) Memorial	Howell	Ozark 417-256-7161
Crowleys Ridge	Stoddard	Southeast 573-290-5730
Davisdale	Howard	Central 573-884-6861
Happy Holler Lake	Andrew	Northwest 816-271-3100
Harmony Mission Lake/Peabody	Bates	Kansas City 816-655-6250
Lamine River	Cooper/Morgan	Central 573-884-6861
Maintz Wildlife Preserve	Cape Girardeau	Southeast 573-290-5730
Poosey	Grundy/Livingston	Northwest 816-271-3100
Seat (Emmett and Leah) Memorial	Worth/Gentry	Northwest 816-271-3100
Sever Lake (Henry)	Knox	Northeast 660-785-2420
Stockton Lake	Cedar/Dade/Polk	Southwest 417-895-6880
Talbot (Robert E)	Lawrence	Southwest 417-895-6880
Thomas Hill Reservoir	Macon/Randolph	Northeast 660-785-2420
Whetstone Creek	Callaway	Central 573-884-6861
White River Trace	Dent	Ozark 417-256-7161
White (William G. and Erma Parke) Memorial	Lincoln	St. Louis 636-441-4554

ing happened. There were no birds and I endured even more pain as I exited the blackberries.

After I released Babe, she continued to work up the woody draw another 40 yards. Her wagging tail was a good sign that she was still on to something. The other two dogs joined in, also excited.

When they reached the end of the draw, all three dogs froze on a patch of ragweed and annual lespedeza. As soon as I moved in, a whirlwind of fluttering wings enveloped me as about 15 bobwhites flushed.

I regained my composure quickly enough to point my 20-gauge on a single bird as it flew along the woody draw. I saw a puff of feathers after I squeezed the trigger. Gretchen fetched the bird, a beautiful bobwhite rooster. I was happy for her. She was more than 13 years old and would soon be limited to house duty. The successful retrieve was like a retirement gift for her.

I hunted the rest of the day in places where we had found coveys on opening day and ventured into unexplored parts of the conservation area. Even though I didn't find the other coveys, I did find small white piles of droppings where the birds had roosted. In other words, the quail just didn't happen to be in the places we looked for them. The dogs worked well, though, and we had a pleasant hunt.

QUAIL HUNTING TIPS

Quail Emphasis Areas and many other conservation areas support good quail populations, but finding birds can still be a challenge. The abundance of good habitat actually provides quail plenty of places to hide from hunters and dogs. As the season progresses the birds only become more elusive and harder to find.

A research project in Missouri and the southeast U.S. placed radio collars on hundreds of quail to find out what bobwhites do when approached by hunters and bird dogs. They found that hunters and bird dogs missed about half the coveys on an area.

Where did the quail go? In some cases the birds flushed or ran away from the hunters and dogs before they could be spotted. Other times the dogs and hunters simply walked past the hiding covey. In a few instances the dogs pointed the coveys, but the quail never flushed and eventually the hunters and dogs moved past them.



NOPPADOL PAOTHONG

The study also found that coveys learned during the hunting season to run or flush way ahead of approaching hunters or dogs.

A good tip to remember when quail hunting is that these birds rarely venture more than 70 feet from woody cover during the winter. Try to hunt in areas with good shrubby or low-growing woody cover such as blackberry and plum thickets or edge feathering. Don't be surprised if a covey you found early in the season isn't in the same place later in the year. Coveys that are frequently disturbed will often move to a different location to avoid being detected.

Another tip is to limit the amount of noise you make when hunting, especially late in the season. Also consider hunting a different part of a conservation area or try to think of places where most hunters may not venture. Because upland game hunters spend a majority of the time in dense shrubby cover and tall grasses, make sure you wear a hat and coat with hunter orange. ▲

Babe worked hard for the quail.

Answering the Call

Fall is the traditional time of harvest—reason enough for many to look forward to deer hunting season.

IT'S HARD TO ignore the impulse to stock up for winter. Plenty of people—especially those who live in the country—have been canning vegetables, drying fruits and curing hams since the end of summer. They're looking forward to hunting season, too, because they want to put some wild game into their freezers. People are a bit like squirrels in that they seem hard-wired to cache food before the season of scarcity. Many of us also cache a few extra pounds of body fat each fall to help us through the cold months. This phenomenon, popularly known as putting on winter weight, reminds us that preparing for lean times is part of our biology.

People have been harvesting wild animals for as far back as we can trace. Our ancestors were hunters—and successful ones, too, or we probably wouldn't be here to speculate about them. Anthropologists tell us that hunting likely encouraged humans to cooperate and communicate with one another and that hunting is one of the foundations of our cultural and social evolution.

Hunting may no longer be necessary for survival, but it continues to be a strong tradition. Since settlers first came to Missouri, the spirit and lore of hunting have passed from generation to generation. This month, when the firearms deer season opens, thousands of home lights will flicker on at an unusually early hour, and hundreds of thousands of Missourians will decide it would be fashionable to wear bright orange clothing that day. Each year, they reinforce the hunting tradition and pass it on to their children and friends.

Deer hunting is not just point-and-shoot. It's far easier to get meat from the grocery store than to harvest your own. Deer hunting usually involves sitting, focused and alert, for long, cold hours. Good hunters won't even scratch an itch lest they scare away game. Many hunters, despite their perseverance, won't see a deer, and should one come along they may not be afforded a good shot. The lucky hunters who kill a deer may experience a momentary flash of excitement, but that's soon replaced by the reality of having to gut the deer, truss it and haul it from the woods. They'll either render the carcass into steaks, roasts and ground meat at home or take it to a processor, where they'll pay to have someone else cut it up and package it.

In other words, wild venison must be hard won. The mystery of deer hunting is not only that so many Missourians hunt despite its rigors, but also that even those who aren't fortunate enough to shoot a deer find great satisfaction from hunting. Given the deep roots that hunting has in our biology and culture, it's likely that hunters are being rewarded for merely answering the call.

—Tom Cwynar, photo by Noppadol Paothong

White-tailed deer

For More Information

To learn more about hunting in Missouri visit www.missouriconservation.org/7604.





Smooth Sumac

A native shrub with tropical good looks, this species supports wildlife, stabilizes soil ... and can flavor drinks.

IN RECENT TIMES, smooth sumac has lost much of its value. It was once prized by Native Americans for a variety of medicinal uses, including treatment of asthma and dysentery. Because the twigs, leaves and roots also contain tannin, they were processed into stains and dyes. The species is now enjoyed mostly for its crimson fall foliage and the birds it attracts with its abundant berry-like clusters. Some wild edibles fans are also drawn to the fruits, and enjoy soaking them to make a tangy, lemonade-like drink or steeping them for tea. (This practice is not recommended unless the species is positively identified.)

Smooth sumac fruits are eaten by a wide variety of birds, including wild turkey and bobwhite quail. Their spreading canopy also provides quail with shade and escape cover in the summer. Cottontail rabbits and white-tailed deer browse on the shrub's leaves and twigs. Because the species can thrive in areas with poor soils, it is helpful in stabilizing embankments and naturalizing hard-to-cover areas. However, care should be taken in controlling the species, as its dense, thicket-forming colonies may crowd out other native species.

Smooth sumac has ornamental allure due to its dramatic stems, fern-like leaf structure, and bright autumn foliage and fruit. Uses include shrub borders, hedgerows and screens, or naturalizing edges of woodlands. It grows readily in average, dry to medium wet, well-drained soil. New stems sprout from the roots. These "suckers" can be removed to prevent unwanted spread. The species may attain a height of 20 feet, though 6–10 feet is more common.

Both male and female flowers are produced in dense clusters at the end of new growth in late May–July, on separate plants. Clusters are 5–9 inches long and 3–5 inches wide. Flowers are greenish-yellow. The tiny, 1/8-inch-diameter fruits, known as "drupes" (a fleshy fruit with a hard or stony center) are produced in August–September. Each drupe is covered with short, velvety hairs and contains a single seed. Female plants produce showy, erect, pyramidal fruiting clusters (to 8 inches long). The clusters turn red, and then maroon-brown, when ripe and persist through the winter.

Smooth sumac is native to and occurs throughout the U.S. and into southern Canada, but is most common in the eastern U.S. It can be found in upland prairies, thickets, idle fields, borders and openings of woods, roadsides and along railroads. It occurs throughout Missouri.

—Nichole LeClair Terrill, photo by Jim Rathert



For More Information

To learn more about smooth sumac, visit: www.MissouriConservation.org/8252, www.grownative.org (click on "Native Plant Info") or www.mobot.org/gardeninghelp/plantfinder.



Clear Creek CA

Take time to explore the diverse habitat, abundant wildlife and range of outdoor activities at this area.



OFF THE BEATEN path, Clear Creek Conservation Area in rural Vernon and Barton counties escapes the notice of most recreationists. But a beautiful, diverse mosaic of woodland, savanna and native prairie awaits motivated hunters, birdwatchers, hikers and anglers in November.

Clear Creek runs through the eastern portion of the area, and its wooded basin provides great habitat for both deer and turkey. This part of the area is also the farthest from either of the two parking lots, and few visitors seem willing to hike the 1.25 miles into the woodland. The lack of human activity has allowed the deer and turkey populations to remain relatively high—something hunters willing to make the extra effort will appreciate.

Rabbit and quail hunting are quite good on the area's central grassland portion, where several brush piles provide great cover.

The area's large tract of native prairie is highly diverse. In fact, Department biologists have identified more than 200 different plant species on it. This exceptional diversity and productivity have allowed the Department to contract native seed dealers to harvest grass and wildflower seeds. This harvest also serves the Department's efforts to reconstruct prairie throughout the district and region.

A highly diverse native prairie and adjacent savanna also mean a high number of grassland bird species. Visitors can expect to hear, see or find evidence of grasshopper sparrows, Henslow's sparrows, dickcissels, indigo buntings, scissor-tailed flycatchers and the like.

Although the area has no dedicated hiking trails, its access trail into the wooded Clear Creek basin offers hikers a chance to enjoy the area's fall color, birds and other wildlife. Because one hunting season or another applies nearly every month of the year, it's always a good idea to wear blaze orange when hiking on conservation areas.

The Department stocks only sunfish in the area's five ponds, but these little fighters still make for good sport on a crisp fall afternoon. Don't forget to bring your pole and tackle—and even a few kids to add smiles and squeals of delight to the experience.

—Bonnie Chasteen, photo by Noppadol Paothong



Recreation opportunities: Hunting, wildlife viewing, hiking and fishing

Unique features: Native prairie and savanna-woodland complex, Clear Creek basin, access trail, five stocked ponds

Location: Clear Creek CA is 4 miles east of Highway 71 south of Nevada.

For More Information

Call 417-629-3423 or visit www.MissouriConservation.org/a89191



Hunting and Fishing Calendar

FISHING

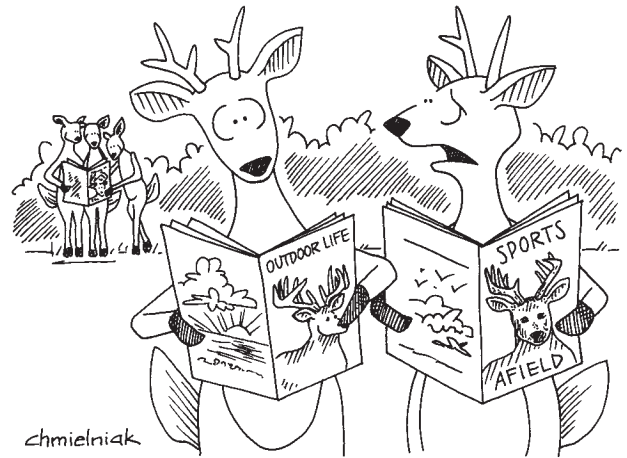
	OPEN	CLOSE
Black Bass (certain Ozark streams, see the <i>Wildlife Code</i>)	5/23/09	2/28/10
impoundments and other streams year-round		

HUNTING

	OPEN	CLOSE
Coyotes	5/11/09	3/31/10
Crow	11/1/09	3/3/10
Deer		
Firearms		
Youth	10/31/09	11/1/09
	1/2/10	1/3/10
November	11/14/09	11/24/09
Antlerless	11/25/09	12/6/09
Muzzleloader	12/19/09	12/29/09
Archery		
	9/15/09	11/13/09
	11/25/09	1/15/10
Doves	9/1/09	11/9/09
Furbearers	11/15/09	1/31/10
Groundhog	5/11/09	12/15/09
Pheasant		
North Zone	11/1/09	1/15/10
Southeast Zone	12/1/09	12/12/09
Quail	11/1/09	1/15/10
Rabbits	10/1/09	2/15/10
Rails (Sora and Virginia)	9/1/09	11/9/09
Ruffed grouse	10/15/09	1/15/10
Squirrels	5/23/09	2/15/10
Turkey		
Archery		
	9/15/09	11/13/09
	11/25/09	1/15/10
Waterfowl	please see the <i>Waterfowl Hunting Digest</i> or see www.missouriconservation.org/7573	
Wilson's (common) snipe	9/1/09	12/16/09
Woodcock	10/15/09	11/28/09
TRAPPING	OPEN	CLOSE
Beaver & Nutria	11/15/09	3/31/10
Furbearers	11/15/09	1/31/10
Otter & Muskrats	11/15/09	see <i>Wildlife Code</i>

For complete information about seasons, limits, methods and restrictions, consult the *Wildlife Code* and the current summaries of *Missouri Hunting and Trapping Regulations* and *Missouri Fishing Regulations*, the *Fall Deer and Turkey Hunting Regulations and Information*, the *Waterfowl Hunting Digest* and the *Migratory Bird Hunting Digest*. For more information visit www.MissouriConservation.org/8707 or permit vendors.

The Department of Conservation's computerized point-of-sale system allows you to purchase or replace your permits through local vendors or by phone. The toll-free number is 800-392-4115. Allow 10 days for delivery of telephone purchases. To purchase permits online go to www.wildlifelicense.com/mo/.



"Photos of supermodel bucks always rattle my self esteem."

Contributors



CAROL DAVIT is a naturalist, writer and editor. She is the communications specialist for the Missouri Conservation Heritage Foundation, which administers the Stream Stewardship Trust Fund, and is the editor of the *Missouri Prairie Journal*. She lives in Jefferson City with her husband, Mike Leahy, and son, Jamie. Together, they are Stream Team #3631.

AARON P. JEFFRIES is the private land program supervisor for the Conservation Department. He and his wife, Leslie, live in Jefferson City. They spend their free time chasing sons Nicholas and Ryan. Aaron enjoys hunting, fishing and improving quail and wildflower habitat on his Osage County farm and others.



JASON SUMNERS grew up in Benton County. He joined the Conservation Department as a deer biologist in December 2008. Prior to that, he studied the mating behavior of white-tailed deer on the King Ranch in south Texas. When not chasing whitetails or longbeards, he can be found fishing for crappie.

Share the Harvest

Share the Harvest is a program that allows hunters to donate venison to needy Missourians.

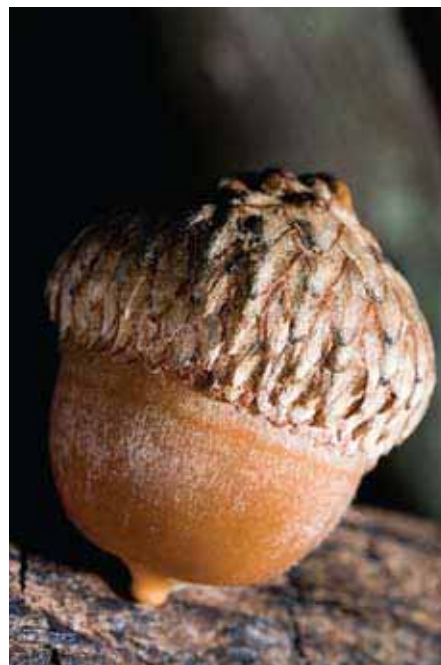
Many families and individuals have no dependable source of protein in their diets. Red meat can provide that important component. Deer is a valuable source of protein; however, unlike most red meat, it is unusually low in fat. Through Share the Harvest, Missouri hunters can help provide this part of the daily diet. Learn how you can contribute at www.MissouriConservation.org/10601.



WHAT IS IT?

Acorn

On the back cover and right is an acorn by Noppadol Paothong. Acorns are also known as hard mast. Oak trees produce acorns. Oaks are divided into two groups: red oaks and white oaks. Hard mast is an important source of fall and winter food for many species of wildlife including deer, squirrels and turkey. To learn more about Missouri's trees and shrubs, visit www.MissouriConservation.org/13940 or go to www.MissouriConservation.org/8374.



AGENT NOTES

Wildlife laws are meant to benefit man and nature.

A CONSERVATION AGENT'S job is to try to achieve an acceptable level of compliance with the *Wildlife Code*. While enforcing the rules is an obvious part of that objective, education can play just as an important role. I believe that once people understand why we have certain rules they are more likely to follow them.

Simply put, wildlife laws are in place to make hunting and fishing safe, fun and fair. One violation that conservation agents deal with frequently is road hunting. The *Wildlife Code* prohibits taking wildlife from a motor vehicle and

from/across a public roadway.

The reason for this is safety.

The most recent incident involved a camouflaged bow hunter who was sitting in his stand at the edge of a field. Late in the evening a car came creeping down the road. The driver poked a shotgun out of the car window and fired at a turkey that was standing in the field, striking the bow hunter with several pellets. This exemplifies why such laws are in place.

Other laws are in place to ensure the future of certain species. When wildlife populations are plentiful and can handle the pressure, harvest laws are more liberal. Wildlife populations that are struggling have more restrictive rules to protect them from overharvest. All this is designed to benefit the resources of Missouri. Responsible hunters and anglers know and understand that wildlife laws are their friend. Once you know this, following the rules just makes sense.



Jeff Scott is the conservation agent for Bollinger County, which is in the Southeast Region. If you would like to contact the agent for your county, phone your regional Conservation office listed on Page 3.

WHAT IS IT?

Our photographers have been busy exploring the intricacies of the Missouri outdoors. See if you can guess this month's natural wonder. The answer is revealed on the inside of this back cover.



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